	Application No.	Applicant(s)
Notice of Allowability	09/807,060	SEO ET AL.
	Examiner	Art Unit	
	Duc C. Ho	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *the amendment filed 12-12-05*.

2. ☒ The allowed claim(s) is/are *1-21, and 23-31. Renumbered 1-30, respectively*.

3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☒ All   b) ☐ Some*   c) ☐ None of the:

       1. ☒ Certified copies of the priority documents have been received.

       2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

       3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

       1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of

      Paper No./Mail Date _____ .

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☐ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

Reason for Allowance

1.   Regarding claims 1-4, the prior art fails to teach or suggest a method for carrying out an idle handoff from a macrocell to a microcell (picocell) in a hierarchical cell structure, comprising the steps of checking whether a value of pseudo noise (PN) code is greater than T_ADD and greater than Ec/Io of the macrocell, by periodically searching the pseudo noise (PN) code of the microcell, to carry out the idle handoff to the microcell, wherein the T_ADD represents a value of a base station pilot strength required for the base station of a neighboring set to be included in a candidate set, the Ec represents pilot energy accumulated during one pseudo noise (PN) chip period, and the Io indicates a total power spectrum density within a reception bandwidth of the macrocell, in combination with other limitations, as specified in the independent claim 1.

Regarding claims 5-9, the prior art fails to teach or suggest a method for carrying out an idle handoff from a microcell (picocell) to a macrocell in a hierarchical cell structure, comprising the steps of checking whether a value of pseudo noise (PN) code is greater than T_ADD and greater than Ec/Io of the macrocell, by periodically searching the pseudo noise (PN) code of the macrocell, to carry out the idle handoff to the macrocell, wherein the T_ADD represents a value of a base station pilot strength required for the base station of a neighboring set to be included in a candidate set, the Ec represents pilot energy accumulated during one pseudo noise (PN) chip period, and the Io indicates a total power spectrum density within a reception bandwidth of the macrocell, in combination with other limitations, as specified in the independent claim 5.

Regarding claims 10-14, the prior art fails to teach or suggest a method for carrying out a

handoff from a macrocell to a microcell (picocell) in a hierarchical cell structure, comprising the

steps of checking whether a value of pseudo noise (PN) code is greater than T_ADD, by

periodically searching the pseudo noise (PN) code of the microcell, to carry out the handoff in

traffic to the microcell, in combination with other limitations, as specified in the independent

claim 10.

Regarding claims 15-20, the prior art fails to teach or suggest a method for carrying out a

handoff from a microcell (picocell) to a macrocell in a hierarchical cell structure, comprising the

steps of checking whether a value of pseudo noise (PN) code is greater than T_ADD, by

periodically searching the pseudo noise (PN) code of the macrocell, to carry out the handoff in

traffic to the macrocell, in combination with other limitations, as specified in the independent

claim 15.

Regarding claim 21, the prior art fails to teach or suggest a method for carrying out a

handoff between an upper cell and a lower cell in a hierarchical cell structure, comprising the

step allocating in cross, frequency of the upper cell and the lower cell to a primary channel and a

secondary channel of a number assignment module (NAM) of a single mode mobile station, in

combination with other limitations.

Regarding claims 23-24, the prior art fails to teach or suggest a method for carrying out

an idle handoff from a macrocell to a microcell (picocell) in a hierarchical cell structure in a

radio communication system having a microprocessor, comprising the step of checking whether

a value of pseudo noise (PN) code is greater than T_ADD and greater than Ec/Io of the

macrocell, by periodically searching the pseudo noise (PN) code of the microcell, to carry out the

idle handoff to the microcell, in combination with other limitations, as specified in the

independent claim 23.

Regarding claims 25-26, the prior art fails to teach or suggest a computer readable storing

instructions for executing a method for carrying out an idle handoff from a microcell (picocell)

to a macrocell in a hierarchical cell structure in a radio communication system having a

microprocessor, comprising the step of checking whether a value of pseudo noise (PN) code is

greater than T_ADD and greater than Ec/Io of the microcell, by periodically searching the

pseudo noise (PN) code of the macrocell, to carry out the idle handoff to the macrocell, in

combination with other limitations, as specified in the independent claim 25.

Regarding claims 27-28, the prior art fails to teach or suggest a computer readable storing

instructions for executing a method for carrying out a handoff in traffic from a macrocell to a

microcell (picocell) in a hierarchical cell structure in a radio communication system having a

microprocessor, comprising the step of checking whether a value of pseudo noise (PN) code is

greater than T_ADD, by periodically searching the pseudo noise (PN) code of the microcell, to

carry out the handoff in traffic to the microcell, in combination with other limitations, as

specified in the independent claim 27.

Regarding claims 29-30, the prior art fails to teach or suggest a computer readable storing

instructions for executing a method for carrying out a handoff in traffic from a microcell

(picocell) to a macrocell in a hierarchical cell structure in a radio communication system having

a microprocessor, comprising the step of checking whether a value of pseudo noise (PN) code is

greater than T_ADD, by periodically searching the pseudo noise (PN) code of the macrocell, to

carry out the handoff in traffic to the macrocell, in combination with other limitations, as specified in the independent claim 29.

Regarding claim 31, the prior art fails to teach or suggest a computer readable storing instructions for executing a method for carrying out a handoff between an upper cell and a lower cell in a hierarchical cell structure in a radio communication system having a microprocessor, comprising the step in which the computer has the record of the program to further realize a third function of allocating in cross, frequency of the upper cell and the lower cell to a primary channel and a secondary channel of a number assignment module (NAM) of a single mode mobile station, in combination with other limitations, as specified in the independent claim 31.

2.   Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc Ho whose telephone number is (571) 272-3147. The examiner can normally be reached on Monday through Friday from 7:00 am to 3:30 pm.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (571) 272-3155.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-2600.

4.   Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patent Examiner

Duc Ho

12-22-05